FOR TEACHERS ONLY

The University of the State of New York
REGENTS HIGH SCHOOL EXAMINATION

EARTH AND SPACE SCIENCES

Friday, January 23, 2026 — 9:15 a.m. to 12:15 p.m., only

RATING GUIDE

Directions to the Teacher:

Refer to the directions on page 2 before rating student papers.

Updated information regarding the rating of this examination may be posted on the New York State Education Department's web site during the rating period. Check this web site at: https://www.nysed.gov/state-assessment/high-school-regents-examinations and select the link "Scoring Information" for any recently posted information regarding this examination. This site should be checked before the rating process for this examination begins and several times throughout the Regents Examination period.

Directions to the Teacher

Follow the procedures below for scoring student answer papers for the Regents Examination in Earth and Space Sciences. Additional information about scoring is provided in the publication *Directions for Scoring Regents Examinations*.

Allow 1 credit for each correct response.

At least two science teachers must participate in the scoring of the open-ended questions on a student's paper. Each of these teachers should be responsible for scoring a selected number of the open-ended questions on each answer paper. No one teacher is to score more than approximately one-half of the open-ended questions on a student's answer paper. Teachers may not score their own students' answer papers.

Students' responses must be scored strictly according to the Rating Guide. For open-ended questions, credit may be allowed for responses other than those given in the rating guide if the response is a scientifically accurate answer to the question and demonstrates adequate knowledge as indicated by the examples in the rating guide. Do not attempt to correct the student's work by making insertions or changes of any kind. On the student's separate answer sheet, for each question, record the number of credits earned and the teacher's assigned rater/scorer letter.

Fractional credit is *not* allowed. Only whole-number credit may be given for a response. If the student gives more than one answer to a question, only the first answer should be rated. Units need not be given when the wording of the questions allows such omissions.

For hand scoring, raters should enter the scores earned in the appropriate boxes printed on the separate answer sheet. Next, the rater should add these scores and enter the total in the space provided. Then the student's raw score on the test should be converted to a scale score by using the conversion chart that will be posted on the Department's web site at: https://www.nysed.gov/state-assessment/high-school-regents-examinations no later than January 23, 2026. The student's scale score should be entered in the box labeled "Scale Score" on the student's answer sheet. The scale score is the student's final examination score.

Schools are not permitted to rescore any of the open-ended questions on this exam after each question has been rated once, regardless of the final exam score. Schools are required to ensure that the raw scores have been added correctly and that the resulting scale score has been determined accurately.

Because scale scores corresponding to raw scores in the conversion chart may change from one administration to another, it is crucial that, for each administration, the conversion chart provided for that administration be used to determine the student's final score.

The test item map on page 11 identifies the Performance Expectation with which each test question is aligned. All NYSP-12SLS Performance Expectations are three-dimensional (https://www.nysed.gov/sites/default/files/programs/standards-instruction/p-12-science-learning-standards.pdf). The integration of these three dimensions provides students with a context for the content of science (DCI), the methods by which science knowledge is acquired and understood (SEP), and the ways in which the sciences are connected through concepts that have universal meaning across the disciplines (CCC).

1 [1] Allow 1 credit for *three* correct responses, as shown below:

Statement 1:	X	energy, predicted by scientists, that is distributed throughout the universe
Statement 2:	X	cooled and then became transparent
Statement 3:	X	galaxies formed in areas of higher density

2 [1] Allow 1 credit for 2.

3 [1] Allow 1 credit for 1.

4 [1] Allow 1 credit for 1.

5 [1] Allow 1 credit. Acceptable responses include, but are not limited to:

— The greater mass of Betelgeuse causes nucleosynthesis to occur at a faster rate than the Sun.

— The more massive a star, the greater the rate of fusion.

6 [1] Allow 1 credit for indicating *three* correct choices, as shown below:

Statement 1

Evidence for the distribution pattern of the plastic bath toys from the accident location to the northwest coast of North America is provided by

- [ ] the movement of the toys along the Kuroshio Current, followed by movement along the California Current
- [X] the movement of the toys along the North Pacific Current, followed by movement along the Alaska Current

Statement 2

One cause of the global circulation patterns of ocean currents is the

- [X] location and distribution of landmasses
- [ ] distance from the equator

Statement 3

Other than ocean currents, global patterns that contributed to the distribution of the toys were also influenced by atmospheric

- [ ] concentrations of greenhouse gases
- [X] density and heat energy differences

7 [1] Allow 1 credit for 2.

8 [1] Allow 1 credit for 2.

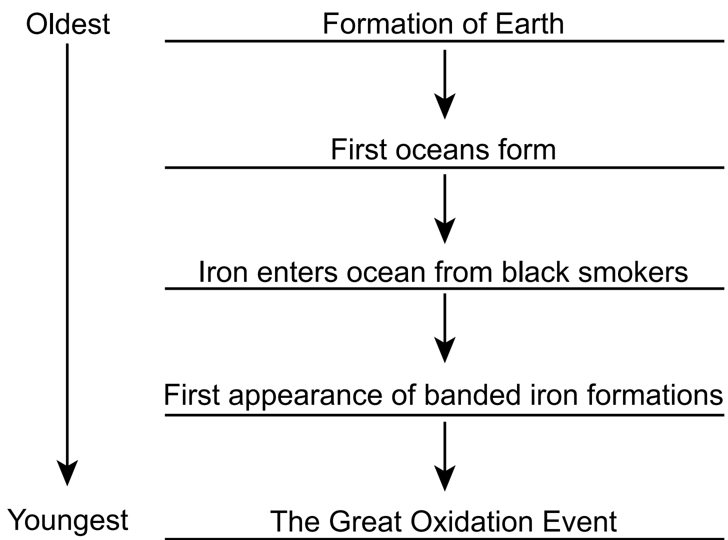
9 [1] Allow 1 credit for 1.

10 [1] Allow 1 credit for 1.

11 [1] Allow 1 credit for 1.

12 [1] Allow 1 credit for 4.

13 [1] Allow 1 credit for the correct order, as shown below:



14 [1] Allow 1 credit for 3.

15 [1] Allow 1 credit for an acceptable response. Acceptable responses include, but are not limited to:

— Humans built highways near limestone and dolostone mines because the crushed stone used to make highways is produced at these mines.

— Limestone and dolostone mines produce the crushed stone used in highway construction. Highways have been built near limestone and dolostone mines because transporting crushed stone is very expensive.

16 [1] Allow 1 credit for selecting all *three* correct choices for these statements, as shown below:

Statement 1: *B*

Statement 2: *D*

Statement 3: *E*

17 [1] Allow 1 credit for 3.

18 [1] Allow 1 credit for 3.

19 [1] Allow 1 credit for a correctly-completed list, as shown below, *and* an acceptable justification.

List of Moons

Charon	Shortest orbital period
Styx	
Nix	
Kerberos	
Hydra	Longest orbital period

Acceptable justifications include, but are not limited to:

— According to one of Kepler's laws, objects orbiting at a greater distance have a longer period of revolution.

— In order to sweep out equal area in equal time, moons travel faster when closer to a planet, causing a shorter orbital period for moons that are closer.

20 [1] Allow 1 credit for 4.

21 [1] Allow 1 credit for 3.

22 [1] Allow 1 credit for selecting Support *and* an acceptable justification. Acceptable justifications include, but are not limited to:

— Charon's orbital period is 6.4 Earth days and its rotational period is also 6.4 Earth days.

— Charon's orbital period and rotational period are the same.

23 [1] Allow 1 credit for 2.

24 [1] Allow 1 credit for 3.

25 [1] Allow 1 credit for 3.

26 [1] Allow 1 credit for 4.

27 [1] Allow 1 credit for Atmosphere *and* an acceptable explanation. Acceptable explanations include, but are not limited to:

— The Eurostar uses 6 g/km of carbon per person; the ferries use 19 g/km of carbon.

— Short-haul flights release 249 g/km more carbon into the atmosphere compared to the Eurostar train.

Note: Do *not* accept explanations without numerical values.

28 [1] Allow 1 credit for 2.

29 [1] Allow 1 credit for an acceptable response. Acceptable responses include, but are not limited to:

— As the ice mass decreased, it caused the hydrosphere (ocean) sea level to increase because the ice melted due to an increase in temperature.

— When ice mass decreased on the continent, it created a feedback by increasing sea level measurements around the continent for the same time period because ice probably melted into the ocean.

— When ice melted, fresh water entered the ocean, causing the salinity to drop.

30 [1] Allow 1 credit for 1.

31 [1] Allow 1 credit for *three* correct choices, as shown below:

Statement 1: *A*

Statement 2: *D*

Statement 3: *H*

32 [1] Allow 1 credit for 4.

33 [1] Allow 1 credit for 3.

34 [1] Allow 1 credit for 4.

35 [1] Allow 1 credit. Acceptable responses include, but are not limited to:

— Bennu and Earth must be in the same place when/where their orbits cross.

— The celestial objects must meet when/where their paths intersect.

36 [1] Allow 1 credit for 2.

37 [1] Allow 1 credit for correctly placing check marks in *all* of the rows, as shown below:

Criteria/Constraint	Options 1 and 2 (DART/Nuclear)	Option 3 (Yarkovsky Effect)
Occurs Continuously		✓
Solar Radiation		✓
Risk of Debris Striking Earth	✓	
Causes Rapid Change in Orbit	✓	

Note: Allow credit if a symbol other than a check mark is used.

38 [1] Allow 1 credit for correctly checking sandstone *and* acceptable evidence. Acceptable evidence includes, but is not limited to:

— A sandstone layer is at the top of each waterfall, so it must be more resistant to weathering and erosion.

— The sandstone layers extend farther out in the rock column compared to the shale.

— The shale shows more erosional cutback than the sandstone.

39 [1] Allow 1 credit for 1.

40 [1] Allow 1 credit for 4.

41 [1] Allow 1 credit for 2.

42 [1] Allow 1 credit for *both* a negative effect and a resulting change to one Earth system. Acceptable responses include, but are not limited to:

Negative Effect	Resulting Change to One Earth System
— Land must be cleared/deforested to dig a mine.	— When land is cleared, more erosion of the geosphere occurs. — When land is deforested, the biodiversity of the biosphere is reduced/eliminated.
— Mine wastes (tailings) are stored on the surface, which causes pollution.	— Precipitation dissolves materials in the mine waste, which infiltrates to groundwater, polluting it. — Materials from the piles of tailings become airborne and can be harmful to people as air pollution.

43 [1] Allow 1 credit for 3.

44 [1] Allow 1 credit for 4.

45 [1] Allow 1 credit for 2.

46 [1] Allow 1 credit for 3.

47 [1] Allow 1 credit for *both* a correct atmospheric composition and surface temperature. Acceptable responses include, but are not limited to:

Change in atmospheric composition:

— decreased carbon dioxide/CO_2 levels

— lower levels of the greenhouse gas carbon dioxide/CO_2

— oxygen levels/O_2 increased

Change in surface temperature:

— Earth's surface temperature decreased

— the temperature was lower/cooler

48 [1] Allow 1 credit for an acceptable response. Acceptable responses include, but are not limited to:

— Dragonflies living 200 million years ago would have a smaller wingspan because oxygen levels were approximately 15%.

— The oxygen levels were lower at that time, and dragonflies would most likely have a smaller wingspan than modern dragonflies.

49 [1] Allow 1 credit for 1.

50 [1] Allow 1 credit for 4

The *Chart for Determining the Final Examination Score for the January 2026 Regents Examination in Earth and Space Sciences* will be posted on the Department's web site at: https://www.nysed.gov/state-assessment/high-school-regents-examinations. Conversion charts provided for previous administrations of the Regents Examination in Earth and Space Sciences must NOT be used to determine students' final scores for this administration.

Online Submission of Teacher Evaluations of the Test to the Department

Suggestions and feedback from teachers provide an important contribution to the test development process. The Department provides an online evaluation form for State assessments. It contains spaces for teachers to respond to several specific questions and to make suggestions. Instructions for completing the evaluation form are as follows:

1. Go to https://www.nysed.gov/state-assessment/teacher-feedback-state-assessments.
2. Click Regents Examinations.
3. Complete the required demographic fields.
4. Select the test title from the Regents Examination dropdown list.
5. Complete each evaluation question and provide comments in the space provided.
6. Click the SUBMIT button at the bottom of the page to submit the completed form.

THE STATE EDUCATION DEPARTMENT

THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234

January 2026 Earth and Space Sciences Test Item Map to the Standards

Question	Type	Points	Performance Expectation
1	Constructed Response	1	HS-ESS1-2
2	Multiple Choice	1	HS-ESS1-2
3	Multiple Choice	1	HS-ESS1-2
4	Multiple Choice	1	HS-ESS1-3
5	Constructed Response	1	HS-ESS1-3
6	Constructed Response	1	HS-ESS2-8
7	Multiple Choice	1	HS-ESS2-8
8	Multiple Choice	1	HS-ESS3-3
9	Multiple Choice	1	HS-ESS3-2
10	Multiple Choice	1	HS-ESS2-7
11	Multiple Choice	1	HS-ESS1-6
12	Multiple Choice	1	HS-ESS2-2
13	Constructed Response	1	HS-ESS2-1
14	Multiple Choice	1	HS-ESS2-3
15	Constructed Response	1	HS-ESS3-1
16	Constructed Response	1	HS-ESS3-4
17	Multiple Choice	1	HS-ESS3-2
18	Multiple Choice	1	HS-ESS3-4
19	Constructed Response	1	HS-ESS1-4
20	Multiple Choice	1	HS-ESS1-4
21	Multiple Choice	1	HS-ESS1-7
22	Constructed Response	1	HS-ESS1-7
23	Multiple Choice	1	HS-ESS1-6
24	Multiple Choice	1	HS-ESS2-2
25	Multiple Choice	1	HS-ESS2-1
26	Multiple Choice	1	HS-ESS1-6
27	Constructed Response	1	HS-ESS3-6
28	Multiple Choice	1	HS-ESS3-5
29	Constructed Response	1	HS-ESS2-2
30	Multiple Choice	1	HS-ESS3-5
31	Constructed Response	1	HS-ESS2-4
32	Multiple Choice	1	HS-ESS3-5
33	Multiple Choice	1	HS-ESS1-4
34	Multiple Choice	1	HS-ESS1-6
35	Constructed Response	1	HS-ESS1-4
36	Multiple Choice	1	HS-ESS1-4
37	Constructed Response	1	HS-ETS1-3
38	Constructed Response	1	HS-ESS2-5
39	Multiple Choice	1	HS-ESS3-1
40	Multiple Choice	1	HS-ESS2-5
41	Multiple Choice	1	HS-ETS1-4
42	Constructed Response	1	HS-ESS2-2
43	Multiple Choice	1	HS-ESS3-2
44	Multiple Choice	1	HS-ESS3-1
45	Multiple Choice	1	HS-ESS3-1
46	Multiple Choice	1	HS-ESS2-7
47	Constructed Response	1	HS-ESS2-2
48	Constructed Response	1	HS-ESS2-7
49	Multiple Choice	1	HS-ESS2-7
50	Multiple Choice	1	HS-ESS2-6